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ABSTRACT

"SpecialNet," a computer-based communications network for educators at all administrative levels, has been established and is managed by National Systems Management, Inc. Users can send and receive electronic mail, share information on electronic bulletin boards, participate in electronic conferences, and send reports and other documents to each other in a timely manner. The system also permits the establishment of separate closed systems within the network for private use, and can serve as a gateway for access to other systems and databases. It operates 24 hours a day, every day of the year, from any telephone in the 50 United States. An appendix lists the National SpecialNet Bulletin Boards. (EW)

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SpecialNet

A National Computer-Based Communications Network

Alfred J. Morin

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SpecialNet is a computer-based communications network operating on the Telenet packet switching network and managed by National Systems Management, Inc. (NSMI). Users can send and receive electronic mail, share information on electronic bulletin boards (see Appendix), participate in electronic conferences, and send reports and other documents to each other in a timely manner. Some users even download data files that have been created at a lower administrative level and moved electronically to a higher administrative level for analysis and reporting.

The name "SpecialNet" was chosen to signify a Special Network for educators at all administrative levels. Originally, the network was designed by experienced educational professionals at NSMI, who identified the need for more and better flow of decision-making information at all levels. The variety of education business now conducted daily on the system would probably astound us all. There are several features of SpecialNet that can help reduce, even eliminate, much of the daily burden of paperwork management. The following examples identify recurring activities in which SpecialNet could be used to reduce the paperwork load.

Electronic Mail

Each Monday morning a memorandum is created at a state agency office and mailed to each local superintendent of schools. Drafting the memo, typing the final version, duplicating the necessary quantity, addressing envelopes, folding and stuffing, affixing postage, and hauling the bags of letters to the mailroom takes all morning. Surface mail will usually have all the letters delivered by Wednesday.

Using a previously prepared list of on-line users, the same memorandum can be waiting in each superintendent's SpecialNet electronic mailbox within minutes after it has been typed.

A school district is revising the Student Handbook and would like all building principals to review and comment on the proposed changes. The draft revisions are typed and a cover memo prepared; both documents are duplicated, the envelopes are addressed and stuffed, and the packages are placed into the district's internal mail system. All principals will have the proposed changes by the following day and should be able to provide their written comments within three to five days.

SpecialNet will deliver the cover memo and handbook revisions to each principal within minutes after they are typed on a word processor and can have the comments back to the superintendent's office the same day.

Electronic Bulletin Boards

The office of the state superintendent of schools prepares and distributes an average of three announcements per week intended for reading by principals and classroom teachers within each local district. When the document arrives by surface mail at the local district office, it may be duplicated and distributed to all building principals for posting, or it may be filed as an insignificant mail piece.

The same documents can be sent on SpecialNet to a state-administered bulletin board maintained specifically for principals. Each school building reads and downloads new items daily and posts the appropriate information in the teachers' lounge—guaranteeing that each item will be available to every teacher in the state.

A request for a specific large-print textbook is prepared by a classroom teacher. After the building principal approves the request, it is sent to the local district office. If a search for the book indicates it is not in any media center, the request is forwarded to the appropriate state office. The request might be forwarded again to a regional agency for loan or procurement. The teacher may not actually receive the requested book for months—possibly never.

The district could place the request for large-print material on the SpecialNet VISION electronic bulletin board, which is monitored by districts and national vision agencies throughout the United States. A respondent would indicate a source for the needed large-print text, along with any related costs, and send an acknowledgment within a few days directly to the district making the request.

Electronic Conferencing

The state agency is preparing new guidelines on student eligibility for varsity athletics related to academic standing. Athletic coaches from all local districts are asked to attend a one-day conference at a central location to discuss this issue and provide guidance to state staff responsible for preparing the new guidelines. Many cannot attend because of prior commitments, while others cannot locate substitute coaches to conduct their physical education classes. Those who attend provide a limited perspective and impatiently question the significance of the issue.

A SpecialNet electronic conference would allow all coaches to provide comment at their own convenience without leaving their districts. They could also react to the comments of others without strong personality overtones. The conference findings would be shared electronically by all participants.

A local superintendent wishing to obtain comments on a particular topic from all building principals asks them to attend a meeting at the central office. The superintendent presents the issue and solicits comments from the principals in attendance. The day-long meeting concludes with a reading of the major comments and a statement by the superintendent on the possible outcomes as a result of the meeting. The principals return to their respective buildings past the end of the school day and must wait until the next day to resume important administrative matters.

The superintendent's single-issue statement could initiate a SpecialNet on-line conference; all principals could provide comment and react without attending a meeting. Follow-up comments could be added after each principal had an opportunity to think about the earlier comments made by others. The superintendent could request additional information on items that seemed promising. All principals could continue to administer their respective buildings as they participate in the conference over a one- to three-day period.

The SpecialNet network has been in operation since 1981 and continues to expand in both services and users. Every state education agency is a subscriber, as are all local education agencies in about 20 states. In the remaining states many local districts subscribe even though it is not mandated by their respective state departments of education. In addition, many colleges and universities, private schools, and special interest organizations use SpecialNet as an administrative communication medium.

Requirements to Go On-Line

Almost any computer or word processing machine with telecommunication capability can be used to access SpecialNet. Users pay an annual subscription fee in addition to connect charges while they are on-line. Discounts are provided to large organizations with many users; connect charges are discounted to all users. SpecialNet users enjoy the lowest connect rates available for any network service currently offered in the United States.

The system operates 24 hours a day, every day of the year, from any telephone in the 50 United States. This 24-hour access is especially important in reducing communication problems caused by different time zones. Users send and receive information when they are ready and able; interruptions in meetings and "telephone tag" are virtually eliminated. SpecialNet can also be used to communicate with about 70 other nations by electronic mail, Telex, Mailgrams (Xpress Mail), TWX, or DDD.

Technical Assistance and Support

SpecialNet subscribers have access to a variety of technical assistance and support services:

- Analysis of local communications requirements with identification of cost to be achieved from adopting a computer-based communications approach.

- System design to meet local information and data processing needs including specially tailored local services such as bulletin boards, closed user groups, list development, forms design for data collection, and other on-line features available through the network.

- Free training including instruction guides for self-paced learning, slide programs, and telephone assistance. On-site training using projection equipment is also provided to large organizations.

- Cost accounting records showing monthly summaries of activities for each user, along with optional group usage statistics and management reports, are provided to assist state and local education agency finance and administrative offices.

High Professional Standards

SpecialNet users include state and local administrators who need to collect, use, and disseminate information. Aside from the practical value of increased efficiency in agency messaging at all levels, users also communicate with colleagues in other agencies. The on-line interaction with decision makers across the nation is a most unusual relationship. The increased growth of the network is a result of the continuous sharing of information for a common purpose. Both common and unique problems in education can be shared with other professionals. This dynamic, daily interaction with other users is the key feature of SpecialNet. The "feeding of the intellect" occurs at many levels; SpecialNet lets users find the level at which they are most comfortable.

The network provides an ideal mechanism to support the information flow needed by professional educators. Information is timely, responsive, practical, and drawn from real-life experiences. SpecialNet is a highly focused system for education professionals.

The quality of the administration of the many parts of SpecialNet assures a high standard of interaction among the users. Advertising is not allowed, nor is the posting of messages that extol a new product or service unless the writer is describing personal experience. System users know they will not be bothered with insignificant matters. When they are asked to assist in a particular situation, they know that someone out there is trying to solve a real problem with real students. SpecialNet users take pride in knowing that their contributions, large or small, can make a difference in the future of a student.

System Flexibility

As you can see, the system is very flexible. It is designed to accommodate many different applications and many diverse needs. The system can be customized to solve a particular communication problem. "Special Networks" can be established with different costs from those associated with SpecialNet.

We recognize that many potential educational users are not particularly interested in the information available through SpecialNet, although they may have a need to communicate with SpecialNet users via electronic mail. Superintendents, school lunch administrators, transportation officials, finance officers, and vocational education staff come to mind as potential beneficiaries of this technology. Some of these groups may simply require the electronic mail function; others may need private bulletin boards accessible only to members of their group, while still others may also need to access huge data bases with thousands or even millions of records on-line. Taking advantage of the hierarchical structure of the network and using the new gateway for access to powerful mainframe computers operating sophisticated data bases, NSMI can develop a Special Network for any of these groups. Costs for such Special Networks depend upon the specific requirements of the group, and are not necessarily related to those for SpecialNet.

Expansion to Meet Future Needs

SpecialNet can grow at an almost unlimited pace, thanks to the communications technology Telenet already has in place. Almost overnight, SpecialNet could be expanded to bring every administrator and every classroom teacher in the nation on-line. But studies of the advancing technology in the education market tell us that in order to bring all the nation's educators on-line, we must offer some exceptional types of services. The network expansion opportunities currently being implemented by the administrators of SpecialNet include the following selected examples:

Gateway Access to Other Hosts

Using several host computers to provide a variety of services and information bases creates confusion for the user. Each host has its own electronic address, user name, and password. An electronic gateway will allow the SpecialNet user to sign on just once but be able to access a variety of other host computers. Specialized, sophisticated data bases can be established for users who need them while making access to them as easy as a single sign-on to SpecialNet.

Development of Specialized Data Base Services

The first specialized data base service to be offered on SpecialNet is one currently being established by the American Printing House for the Blind (APH). The data base and associated accounting system will reside on the APH Hewlett Packard computer. Teachers of blind and visually impaired students across the nation will have on-line access to the APH catalog of more than 100,000 items available for purchase. Materials can be ordered and paid for while on-line. The vendors who supply the materials will have access to their part of the catalog to update prices and item descriptions and add new entries.

Creating Parallel Networks

Establishing a new network with many users requires that a service be in place before potential members are willing to sign on. Establishing a network within SpecialNet, but with its own identity, can hasten the process of bringing on new members whose primary interest is focused on a subset of the information available on the larger system. LitLine, for example, is a national network for adult literacy. It is available to agencies or individuals who currently subscribe to SpecialNet, for a small additional subscription fee. New members enjoy all of the services of SpecialNet, but also conduct their own focused group activities. This federally mandated, nationwide network provides its members direct access to educators, volunteers, businesses, resource organizations, policy-makers, advocacy groups, and others interested in adult literacy.

Utilizing the same computer-based communications technology available with SpecialNet, independent networks, also managed by NSMI, allow special interest groups to conduct their business in total privacy. In California, for example, a group of educators established SchoolNet several years ago as a closed system for their own private use. This network has grown considerably and continues to make use of electronic mail almost exclusively, according to the wishes of the membership. In another example, a national consumer advocacy group, working with the Office of State Attorney Generals, is establishing an independent network to monitor utility costs and related legislation at state and federal levels nationwide. The Council of State Administrators of Vocational Rehabilitation developed a highly successful network that operates in a similar fashion. A final example is a custom software house with major clients in national banking. The firm is establishing an independent, nationwide network to provide ongoing technical assistance to customers using the many features of the special applications packages it develops.

Statewide Data Collection Systems

There is a continuous need within all state governments to move educational data from the local school building to the state's mainframe computer, sometimes with intermediate stops along the way. SpecialNet administration is currently working under contract with one such state agency to accomplish the required data transfer in a simple and efficient manner. Special software will allow classroom teachers to input building level student data to Apple® computers. Selected data will be transmitted to a District Office computer via SpecialNet. The data will be used at that level for summary administrative purposes and, once again, selected data will be transmitted via SpecialNet to a state level small computer. The state level computer will produce required summary reports and eventually be used to pass the data along to the state mainframe—all with the aid of SpecialNet. The savings in leased lines for the first year alone will pay for all development and installation costs.

Improved Communications Software

While computer-based communication seems easy to those of us who use it daily in our work, uninitiated users do not share the same opinion when they go on-line the first few times. New software that makes it an effortless activity to go on-line, send and read mail, and check bulletin boards is on the way. The new software to be made available to SpecialNet users will greatly reduce new user apprehension about going on-line and also make the experienced user even more efficient. It can totally automate the computer-based communications process, which will reduce connect time, which will reduce user on-line costs.

National Systems Management, Inc.

National Systems Management, Inc. (NSMI), developer and administrato the SpecialNet system, has been providing a wide range of electronic communications services for a variety of small and large groups since 19 Working directly with Telenet, NSMI has become a nationally recognize value-added service provider for the Telemail system. Groups using NSMI–developed networks find they can increase their information processing efficiency, thereby allowing more time for business matters. E processing is especially helpful to the nontechnical user who has little opportunity to learn complex procedures and command structures. Time-o task is critical to administrative effectiveness. NSMI recognizes this important aspect of electronic communications and is committed to ensurin that all of its networks provide increased efficiency in business administration and information management.

Appendix: National SpecialNet Bulletin Boards

AIA The AIA (Artificial Intelligence Applications) bulletin board provides information regarding the development of expert systems (ES) with application to special education. This information includes reports and editorials on recent events about the development of ES programs, conferences, and reviews of books and articles. AIA is managed by Utah State University and its User Name is UTAH.USU.

AIDS The AIDS board endeavors to keep users up to date on developments about Acquired Immune Deficiency Syndrome by posting both news stories and full texts of important documents concerning AIDS. The board is managed by EDLAW, Inc. and its User Name is EDLAW.

APPLE Apple Computer's Office of Special Education Programs (OSEP) manages this technical assistance bulletin board. OSEP posts announcements of model special education computer programs and applications (including new and important products from third parties) on the APPLE board. The board also offers an efficient vehicle for raising and responding to questions, concerns, and wishes of the special education and rehabilitation communities. The Apple OSEP SpecialNet User Name is APPLE.OSEP.

ASHA.UPDATE Provides information on speech, language, and hearing for individuals interested in sharing ideas and resources on these topics. The American Speech-Language-Hearing Association (ASHA) announces national office, committee, and board activities on this board. Other topics covered include federal and state legislation, workshops, advocacy activities, new policies and positions, clinical practice procedures, and licensure and certification information.

ASSESSMENT Established in response to requests from subscribers, this board provides a place where educators can communicate directly with test developers and publishers about tests and assessment instruments. Publishers post announcements of new assessment instruments.

BILINGUAL Focuses on promising practices, legislative action, research, conferences, and so on, related to the area of bilingual special education. The Bilingual bulletin board is managed by the Handicapped Minority Research Institute on Language Proficiency at the University of Texas at Austin.

CAREER.CONNECTION Contains information about individuals seeking employment. Brief information about each applicant is displayed. If you are looking for candidates to fill job openings in your agency, you may find just the person you are looking for by scanning the CAREER.CONNECTION board. The board is managed by National Systems Management, Inc. and its User Name is NSMI.

CEC.NEWS Communicates information about activities of the Council for Exceptional Children (CEC), including activities of the national office, governing bodies, state and provincial federations, divisions, committees, and other CEC units in the United States and Canada. Messages can be posted by CEC headquarters staff and officers of CEC units.

CHAIN Establishes a link between parent coalitions, alliances, and other groups to share information on topics of vital interest to parents, including legislative issues, parent training programs, and resources and services available for parents.

COMMUNITY.LIVING Provides a vehicle for sharing ideas, projects, research, training, and best practices specifically related to the needs of handicapped youth and adults living and working in community settings.

COMPUTER Provides information on computer applications in education. This board is managed by Education TURNKEY Systems, Falls Church, VA.

CONFERENCE Describes education-related conferences. Subscribers can list upcoming conferences by composing a message to CONFERENCE.

CONSULTANT Listing of consultants in various areas of education. Any consultant can be listed. No judgments are made on consultant qualifications.

CSPD Acronym for Comprehensive System of Personnel Development. This bulletin board includes training programs, statewide CSPD activities, in-service meetings and seminars, books and media useful for professional development, and related items. Users are invited to check this board at least once each week, since its contents are not stored.

DEAFNESS Provides a forum for users interested in all areas related to the hearing impaired: notices of upcoming regional, national, and international meetings and activities; brief summaries of useful techniques, strategies, and materials; requests for information and technical assistance on deafness-related topics, and brief summaries of research studies.

DEAF.UPDATE Contains information generated by Gallaudet University. Users are able to access and print out information related to mainstreaming, technology, and research as it relates to education of the deaf.

EARLYCHILDHOOD Lists information pertaining to services for handicapped children from 0–8 years of age, including early childhood projects, promising practices, curriculum materials, and conferences.

ED.DAILY News from Education Daily, published every business day by Capitol Publications, Inc., available instantly via SpecialNet. This bulletin board provides coverage of congressional action on important education legislation; civil rights lawsuits; activities of federal, state, and local education agencies; and federal programs such as Chapter 1 and PL 94–142. To access the ED.DAILY bulletin board, you must subscribe to Education Daily as well as SpecialNet.

EMPLOYMENT Listings of employment opportunities in education. Any subscriber can send announcements to this bulletin board by composing a message to EMPLOYMENT or by completing an on-line position announcement form.

EXCHANGE Facilitates sharing of information and ideas among SpecialNet users, who can request technical assistance, exchange strategies and project data, and transmit general information.

FEDERAL Focuses on information from Washington for administrators in special education: what is happening in Congress, including notices posted directly by key Congressional committees such as the Senate Select Committee on the Handicapped; activities, new regulations, and policies from the Office of Special Education Programs in the Department of Education; and other legislative and executive news from national associations and organizations.

GIFTED Includes information on counseling, career guidance, curriculum and instruction, program evaluation, teacher in-service, funding, identification, administrative options, and conferences as they relate to education of the gifted.

INTERNATIONAL Brings together persons willing to share information and learn what is happening in education internationally, develop partnerships for participation in international educational events, and contribute to the quality of educational services throughout the world.

LINC.UP Facilitates the exchange of information related to the distribution and dissemination of special education products and links product developers or not-for-profit publishers and distributors. The board is operated by LINC Resources, Inc. of Columbus, Ohio.

LITIGATION Brief descriptions of court cases and hearing decisions, with references to tell where to obtain detailed information. More than 50 categorical files have been created to assist users in accessing the information (for example, LRE, IEP, SURROGATE).

MARKET Intended as a place for users to list any items they may wish to sell or trade. Used computer equipment, software, and many other items are listed by users. Any item listed remains on the board for 90 days, or until NSMI is notified that it has been sold.

MR Provides information, discusses issues, lists teaching techniques, and announces conferences related to educational programs for the mildly and moderately mentally retarded. The board is managed by the North Carolina State Department of Education.

NAPSEC.ISSUES Covers information affecting the private special education community, including federal legislation and regulation, advocacy, litigation, and activities of the National Association of Private Schools for Exceptional Children (NAPSEC), which administers the board. NAPSEC also maintains an on-line directory of private schools listed by category of exceptionality.

OPINIONS SpecialNet's "letters to the editor," providing subscribers with an opportunity to express opinions about issues in education.

PDK.CEDR Establishes two-way communication between international headquarters and chapter officers of Phi Delta Kappa, a professional education organization. PDK exchanges information about publications, exemplary research studies, and innovative programs.

PIP (Programs Involving Parents). Focuses on parent programs of interest to parents and professionals. News is included on issues and trends in parent programming, innovations, publications, meetings, networks, and projects.

PRACTICES Describes promising practices pertaining to classroom instruction, teacher education, in-service, and preservice. Each description is accompanied by effectiveness data gathered on the practice. Referrals are made by state and local education agencies, regional resource centers, and others.

PROGRAM.EVAL Provides information on program evaluation for state and local education agencies. This bulletin board contains information on conferences and events, new products relevant to program evaluation, and reports on evaluation efforts. The Mid-South Regional Resource Center at the University of Kentucky manages this bulletin board.

RFP Tracks grants and contracts issued by federal agencies of interest to SpecialNet subscribers. Programs and areas scanned include general education, special education, rehabilitation, migrant education, bilingual education, higher education, vocational education, women's equity, communication disorders, behavioral sciences, humanities, arts, health, mental health, justice, and transportation.

RURAL Serves as a source of sharing practices, programs, publications, and other resources for rural special education programs. The board is maintained by the American Council on Rural Special Education (ACRES).

SEVERE Contains information on administrative and instructional services for severely handicapped students. Includes descriptions of promising practices, curriculum materials, legislative action, research, and conferences.

SOFTWARE Offers subscribers an opportunity to share evaluations of software and information on educational software, and to ask other users for help in locating effective computer software.

SPEC.PE Provides information on the identification of service needs for handicapped students in physical education. Descriptions of promising practices, resources, and conferences are highlighted.

TECH.LINE Offers news and information about technology in special education. Audio, video, and computer-related technologies are highlighted.

TELEVISION Provides short courses on the uses of public, cable, and satellite television for education purposes. Entries include "how to's" and terminology, descriptions of TV projects around the country, information about cable companies, descriptions of effective videotapes and films for TV or classroom use, current events in telecommunications, and related information.

TRANSITION Used to share resources, strategies, and information found to be successful in helping special-needs individuals move from agency to agency and from school to employment; training, rehabilitation, residential information, and social services.

VISION Provides information on services and materials for the visually impaired. On-line technical assistance is readily available through use of the board. Many users share copies of large-print and braille text through messages posted on the VISION board.

VOCED Focuses on promising practices, research, resources, and conferences in the area of vocational education.

VSA.NEWS Provides users with information regarding quality arts programs for disabled persons. Very Special Arts, an educational affiliate of the John F. Kennedy Center for the Performing Arts in Washington, D.C., manages this bulletin board.

State SpecialNet Bulletin Boards

Many state education agencies have established bulletin boards for posting information needed by users in their states. In some cases, states have established several special-purpose bulletin boards. State boards tend to focus on state policy, legislation, calendar of events, and other areas of special interest to users in a particular state. A partial list of SpecialNet state bulletin boards follows:

CALIFORNIA
COLORADO
CONNECTICUT
FLORIDA
- FLEX
- FLORIDAESE
- FLORIDASUPER

GEORGIA
HAWAII
ILLINOIS
- VACANCIES

INDIANA
- GEN.ASSEMBLY

KANSAS
- KSEX
- KSCAL
- KSIMC

MICHIGAN
- SESA.NEWS

MINNESOTA
- EBD.DIRECTORY
- LOW.INCIDENCE
- MN.SPED.POLICY
- MN.TRANSITION
- SPNET.TRAINING

NEVADA
- NVPARENTINFO
- NVCONFERENCES
- NVLEGISLATIVE
- LEGISNV

NCAROLINA
- NCEX
- REGION.ONE
- REGION.TWO
- REGION.THREE
- REGION.FOUR
- REGION.FIVE
- REGION.SIX
- REGION.SEVEN
- REGION.EIGHT

NEWHAMPSHIRE
- NHEX

PENNSYLVANIA
- RESOURCESYSTEMNEWS

SCAROLINA
TENNESSEE
WVIRGINIA
WYOMING

Alfred J. Morin

Technology applications in educational administration have been the major focus of Mr. Morin's activities for the past 20 years. His ongoing work with state and local education agencies provides him the cutting-edge experience necessary to assist administrators in meeting the new challenges of rapidly advancing technologies.

At the time of this symposium, Mr. Morin was executive vice president for National Systems Management, Inc., a Washington, D.C., firm that operates a number of nationwide computer-based communications networks. Mr. Morin has since formed his own company, Alfred J. Morin and Associates, in order to provide a broader range of technology planning assistance to educational decision makers.